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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,603	01/10/2002	Yoshihiro Shima	500.41075X00	5108

24956 7590 05/20/2005

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

EXAMINER

CHANG, JON CARLTON

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/041,603	SHIMA, YOSHIHIRO	
	Examiner	Art Unit	
	Jon Chang	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election without traverse of Species I (claims 1 and 2) in the reply filed on April 21, 2005 is acknowledged.
2. Claims 3-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species of the invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 21, 2005.

Information Submitted Under 37 CFR 1.56(a)

3. Applicant has submitted a number of documents listed on a document entitled, "Information Submitted Under 37 CFR 1.56(a)." Applicant should list the references on a copy of Form PTO-1449 or PTO/SB/08, or equivalent, to have the citations properly entered in the record. See MPEP 704.14(d).

Specification

4. The disclosure is objected to because of the following informalities: on page 25, line 16, it appears the term "horizontal" may have been intended to read, "vertical".
Appropriate correction is required.

Claim Objections

5. Claim 1 is objected to because of the following informalities:
 - a) In the "rotating" and "correcting" steps of claim 1, the plural form of "feature" should be utilized to maintain consistency with the "extracting coordinates" step.

b) In the "checking" step, the phrase "the matching" lacks proper antecedent
basos/

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,778,703 to Zlotnick and U.S. Patent 5,276,742 to Dasari et al. (hereinafter "Dasari").

Regarding claim 1, Zlotnick discloses a form identification method of identifying types of forms by checking matching of features of a plurality of forms which have previously been registered with features of inputted forms on the basis of position coordinates, comprising the steps of:

extracting one or a plurality of cells, lines, or character lines included in the form from the inputted forms (column 9, lines 11-16, 42-43; the references areas are boxes, i.e., cells; note also in the generation of icons, Fig.4, the image is divided into boxes);

extracting coordinates, as input features, of centers of the cells, lines, or character lines as said features of the forms (note that all coordinates, i.e.,

corresponding to the pixels, of the reference areas are extracted, column 9, lines 42-43, or the boxes for icon generation, column 10, lines 5-8, and therefore the centers are extracted as well);

rotating either said inputted feature or a registered feature of the form which has previously been registered (in the initial alignment, column 11, lines 57-62, note that the icons are a registered feature of a form);

correcting said inputted feature by a micro angle on the basis of a micro inclination angle detected from the cells, lines, or character lines (column 14, lines 12-16 and 25-29; note that the angles are ascertained within .05 radians, column 14, line 22, and are therefore considered micro angles);

checking the matching of the inputted feature with the registered feature (column 14, lines 19-20);

setting the angle at which said inputted feature most coincides with said registered feature to a direction of the inputted form (column 14, lines 23-27); and

setting the type of form having the most coincident registered feature to a form identification result (column 12, lines 50-60).

Zlotnick does not disclose that the initial rotating involves rotating on a 90 degree unit basis. However, this is exceedingly well known in the art as evidenced by Dasari (column 7, lines 59-62). Rotating on a 90 degree basis provides the inherent advantage of large rapid rotation, which would speed processing, especially if a document is inputted sideways or upside down. Therefore, it would have been obvious to one of

ordinary skill in the art to modify Zlotnicks method to utilizing rotation on a 90 degree basis, as taught by Dasari.

Regarding claim 2, Zlotnick further discloses the method according to claim 1, wherein the direction of the inputted form having said most coincident angle is outputted (outputting of the direction is inherent since the direction is used to perform skew compensation, column 14, lines 25-29).

References Cited

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,949,392 to Barski et al. discloses a document recognition system which utilizes a library of templates defining the spacings between pre-printed lines and line lengths for business forms.

U.S. Patent 6,111,984 to Fukasawa discloses a system which performs matching between a reference image and an input image, by generating edge images for the input and reference images, and dividing it into small blocks, and matching is performed based on the blocks.


U.S. Patent 6,798,905 to Sugiura et al. discloses a document orientation recognizing device which first divides a document image into a plurality of areas, and generates a histogram for each area.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (571) 272-7417. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (571)272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
May 16, 2005